Lost Work Productivity in Patients With Distal Radius Fractures

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Purpose: Quantifying work productivity losses includes accounting for time missed from work (absenteeism) and time working at a reduced capacity (presenteeism). The primary purpose of the current study is to determine the fracture-related work productivity losses following a distal radius fracture. The secondary objective of the study is to estimate the societal cost of the decreased work productivity.

Methods: Adult patients with an isolated distal radius fracture were prospectively enrolled into this study. Both operative and nonoperative treatments were included. Participants were assessed regularly until 1 year post-injury. At each assessment, participants completed the Work Productivity Impairment Questionnaire – Specific Health Problem (WPAI-SHP), the EuroQol-5 Dimensions (EQ-5D), and the Disabilities of the Arm, Shoulder and Hand Outcome Measure (DASH). The cost of decreased work productivity was estimated using age and gender adjusted median incomes reported by Statistics Canada (2008 Canadian Dollars).

Results: 53 patients were enrolled in this prospective cohort. The mean age of the participants was 48 ± 15 years and 64% of patients were female. The majority of fractures were treated nonoperatively (64%). At baseline, the mean EQ-5D score was 0.95 ± 0.1, indicating near perfect health; similarly, the mean DASH score at baseline was 3.0 ± 11.9. Both scores decreased significantly in the acute post-injury phase but eventually returned to baseline function at 1 year: EQ-5D 0.90 ± 0.2 ($P = 0.42$) and DASH 9.9 ± 13.1 ($P = 0.20$). 38/53 patients were employed during the study (72%), and employed patients were more likely to receive operative fixation than unemployed individuals ($P = 0.05$). The median work productivity loss was 54% at 2 weeks, 20% at 6 weeks, and 0% at 3 months. Although the median work productivity loss at 6 months and 1 year post-injury remained at 0%, approximately one-fourth of the cohort still reported some work productivity loss at these time points (28% and 21%, respectively). The average estimated societal cost due to lost work productivity was $3317 ± $782 per patient, approximately 7% of their annual salary (interquartile range, $1940-$15,369; 4%-32% of annual salary).

Conclusion: This study prospectively measured the work productivity burden of an isolated distal radius fracture. It extends previous research that has only considered time missed from work because work presenteeism has been included in the assessment. The majority of patients regain full work productivity by 3 months; however, a measurable societal cost from lost productivity is incurred during this time and approximately one-fourth of patients continue to work at less than 100% productivity at 1 year.

- The FDA has not cleared this drug and/or medical device for the use described in this presentation (i.e., the drug or medical device is being discussed for an "off label" use). For full information, refer to page 600.